Ekagra

High Impact – High Value – Business Results

caBIG® Clinical Information Suite

Deployment Project management plan

Version 1.0

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Prepared for: SAIC Frederick
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Prepared by: Ekagra Software Technologies Ltd

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Reviewers

Name	Position
Kalpesh Patel	President, Ekagra Software Technologies Ltd.
Philip Gelda	Project Manager - Deployment DSL
Adam Welsh	Deployment Customer Relationship Manager - Deputy DSL
Shannon Brown	Senior Tech Writer - Training Specialist

Distribution

Name	Location/Role/Organization
Library Master	Project Library
Kalpesh Patel	Ekagra Software Technologies Ltd.

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1 Introduction

The Project Management Plan (PMP) provides the approach for managing the National Cancer Institute caBIG® Clinical Information Suite Deployment task under contract 29XS223.

1.1 Purpose

The document is the Project Management Plan deliverable under this contract. While the document is based on the proposal submitted by EKAGRA and accepted by the government, the approach has been adjusted using the information and requirements obtained during the startup of the task. The PMP provides a general framework for the management of activities and delivery of the work products under the scope of the caBIG® Clinical Information Suite Deployment task.

1.2 Scope

The PMP is designed to provide guidance to the Deployment Team and to inform the NCI customer and related peer teams of the approach and processes followed by the Deployment Team.

After review by the COTR, the PMP will be baselined and any changes to the approach will be reflected in future deliverables.

1.3 Referenced documents

Ekagra Technical Proposal for Task Order 29XS223STO5

2 Background, Technical Approach, and Objectives

The National Cancer Institute (NCI) Center for Biomedical Informatics and Information Technology (CBIIT) envisions a near future where care and research continuously advance the state of knowledge through the sharing of information. The NCI is creating an integrated environment for Biomedical Research, Translational Medicine and Personalized Health Management. This environment, the Cancer Knowledge Cloud, is expected to create a cycle of learning and improvement based on the knowledge sharing between the different systems, tools and applications that make up the research and point-of-care continuum. The Knowledge Cloud supports stakeholders - from patients to providers, researchers to reviewers, and administrators to advocates - and enables effective and efficient collaboration in ways never before possible.

A standards based compliant set of oncology-specific extensions to electronic health records (EHR) is critical to achieve this vision. The caBIG® Clinical Information Suite provides a critical link between different systems, applications and care givers. Leveraging architecture, best practices and industry standards for interoperability (HL7), the caBIG® Clinical Information Suite, as envisioned by CBIIT, emphasizes semantic interoperability (semantic service oriented architecture) with other systems and applications in the cancer ecosystem. The caBIG® Clinical Information Suite will consist of a specification stack (expressed using the Services-Aware Interoperability Framework (SAIF) methodology) and a potential reference implementation. The code implementation will first be a set of services, within the standards and framework of the Enterprise Security Services (ESS), followed by an integration of these services into an open source EHR product to offer a complete, deployable reference implementation.

The caBIG® Clinical Information Suite project provides a concrete roadmap to create industry standard, oncology-specific extensions. The project is supported by several core teams: the Architecture and Analysis Team will define the caBIG® Clinical Information Suite, the Enterprise Services and Reference Implementation Development Teams will build it, and the QA Team will verify the product. The charter of the caBIG® Clinical Information Suite Deployment Team is to assist in the deployment of the oncology-specific extensions in 5 adopter/adapter sites selected and funded by NCI with one other site to be chosen at NCI's discretion. The primary targets for adoption/adaptation are the selected and funded members of the NCI Community Cancer Center Program (NCCCP) with large ambulatory care environments.

The NCI has promoted its policy of data sharing by requiring NCI grantees to provide a data sharing plan that describes what research data will be made available to other scientists. The preferred technical vehicle for sharing information is the caBIG® caGrid and the grid enabled applications developed by CBIIT.

In summary, the purpose of the Deployment Team effort is to support the overall caBIG® Clinical Information Suite project by:

- Determining and planning how each site can adapt and/or adopt oncology extension services and share data
- Providing a feedback loop from the sites to the requirements activities
- Achieving market penetration by collaborating with EHR vendors
- Supporting the execution of the site-specific deployment plans from initial stages through deployment, integration, testing, transition, and support

To ensure success, EKAGRA has assembled a team with experience in:

- The standards, technologies and work procedures and general environment at CBIIT
- The oncology domain and the practices in ambulatory care
- Adapting and integrating off the shelf EHR systems in the clinical environment
- Leveraging the overall resource pool to find the right expertise at the right time to work with site specific issues and meet the evolving needs of a pioneer federal program

2.1 The EKAGRA Team

Our team has specialized, long-term experience in assessing the needs of hospitals and both small and large oncology and general medical practices, as well as outpatient ambulatory centers. We select the best-fit solution, installing, integrating and transitioning the solution into production. The team has the in-depth knowledge of the caBIG® and CBIIT technologies and processes, and has the experience of working with publicly funded Cancer Research Institutions.

The key points of our team approach are as follows:

- Assess the sites' needs and maturity rapidly and globally to provide a planning horizon for the overall task
- Integrate the Deployment Team as a key member of the caBIG® Clinical Information Suite project and act as the customer representative of the caBIG® Clinical Information Suite products
- Reconcile the needs of the sites with the caBIG® Clinical Information Suite development pipeline
- Use a bootstrap approach to assist the project in refining the specification and services, starting with the first site, then learning and providing feedback for the next deployments
- Refine the overall deployment plan to enable the scale up of teams as it becomes necessary to handle several concurrent deployments
- Establish the internal Deployment Lab using the Amazon EC2 cloud

- Contact and work with vendors of open source or commercial products on the integration of services into existing products and deployed systems
- If available, verify the maturity of the services by integration with a selected off-the-shelf (OTS) solution, practicing installations, reviewing all documentation and using the system in the lab
- Develop scope and level of effort (LOE) for the site solutions, establishing the engagement budgets with SAIC-F
- Develop and validate the integration architecture for each site as the basis for the engagement plan
- Manage "Stop and Go" deployment projects with the most likely set of distinct steps/phases including:
    - Assessment
    - Scope planning
    - Obtaining site approvals and buy-ins
    - Computing resources procurement
    - Scheduling installations
    - Conducting data conversions
    - Offering training
    - Possibly conducting incremental pilots and modular deployments in practices
    - Supporting go-live situations
    - Providing post deployment support
- Codify the team's domain knowledge and field practices in a template site assessment and engagement plan
- Establish a knowledge repository for reuse by collecting the specification, code, utilities, practices, tricks of the trade, and lessons learned from each site
    - Organize the knowledge by major brands of EHR systems to facilitate the integration of the physical layer of services by the Services Team

2.2 Assumptions

Our team has based this PMP on several assumptions about the Deployment task. The Architecture and Services Definition Team has identified 23 services that make up the first set of the Services Architecture. Of these 23 services, the following services are most advanced in their specificity:

- Referral Management
- Tumor Staging
- Chemotherapy Management
- Clinical Document Architecture and its use in the coordination of Cancer Documentation
- Treatment Planning

Of these five services, referral management is a new service that is under development and will be released as the first version of a caBIG® Clinical Information Suite product. The second iteration of services is expected in first quarter of GFY 2011. We assume that at least one of the five sites is a candidate for the referral management service and will work as an early adapter.

While the logical specifications have been developed with community input, the first code version relies on a number of specific assumptions and constraints used by the Development Teams to continue making progress while questions are being answered by domain specialists.

2.3 The bootstrap approach

Based on the assumptions detailed in the previous section, the Deployment Team is utilizing a

bootstrap approach that will leverage all the work done to this point and meet the key milestones required, although on a small scale.

The bootstrap analogy means that the first deployment of any service will feed into the design and development of the same service and possibly other services in the pipeline. This feedback loop will be coordinated with the caBIG® Clinical Information Suite project manager and the SAIC-F COTR. Our team will ensure that the first deployment and complete verification of functionality is first performed in the Deployment Lab to make sure that the product installation and operation is mature enough before being exposed to an external team. The Deployment Team can use the lab to verify functionality with site specific needs and perform the gap analysis in an environment that can be controlled, supported and rapidly modified as needed.

The Deployment Team will contact the relevant software vendors in place at the target sites to establish cooperation channels with the goal of obtaining, installing, and configuring the off-the-shelf products in the Lab and assessing the integration tasks.

The first site deployment will highlight gaps and user needs to be filled and addressed. The plan and schedule allow for feedback from real operational constraints and/or a specific integration task with an existing EHR to be incorporated into the product before a final operational deployment is undertaken. Features assessed as being local in nature will be developed as part of the site integration task by the Deployment Team or the site team.

The Deployment Team also expects that the caBIG® Clinical Information Suite Implementation Teams (Specification and/or Development Teams) will be tasked to include the feedback from the first deployments into the product, therefore making the product usable at other sites through rapid maturation. Essentially, the team will apply the acid test of a real deployment to the product and expect a rapid iteration in refining the product.

Once the initial bootstrap for one or two services has been successful, the Deployment Team plans to expand the scope to 1) deploy the matured service to other sites and, 2) repeat the trial process for other services (or a complete reference implementation) as they become available and as these capabilities are matched to deployment site needs.

2.4 Objectives for the Deployment Team

While focused on the short-term ramp-up, the Deployment Team also strives toward the long-term goals of the project. The longer term goals are addressed in the overall approach and project plan, both of which will be refined and iterated as necessary. Specifically, the Deployment Team's primary tasks are as follows:

- Conduct NCCCP Kick-off Meeting, Site Visits, and establish monthly User Group Meetings with stakeholder management team
- Conduct Site Surveys and Planning at the identified deployment sites
- Develop Site Engagement Plans and Approaches
- Develop a Maturity Model across each of the (5) NCCCP Sites
- Develop Deployment Site specific Requirements and Use Cases
- Establish a caBIG® Clinical Information Suite Deployment Simulation Lab
- Develop specific Integration and Deployment Plans for each deployment site
- Support caBIG® Clinical Information Suite Installations
- Support Site Data Sharing Plans and Development of Data Services at each deployment site
- Support Integration of the caBIG® Clinical Information Suite at various adopter/adapter deployment sites
- Support User Acceptance Testing

- Provide Operations, Maintenance, and Training
- Deploy the caBIG® Clinical Information Suite SOA to (1) NCCCP Site for adoption of a service, potentially Referrals, Patient Outcomes Management and/or Clinical Document Management
    - Additional site-specific requirements may steer deployment efforts towards other services
- Deploy the caBIG® Clinical Information Suite SOA for Integration with Existing Vendor Systems for (4) NCCCP Sites for adaptation of Referrals, Patient Outcomes Management and/or Clinical Document Management Services
- Provide Product Support and On-Going Operations
- Deploy the caBIG® Clinical Information Suite SOA to (1) Additional Oncology Hospital or Clinic Identified by CBIIT

The tasks and approach called for in this document are aligned with the best practices for deployments in clinical settings.

3 Project Management Approach

Our team's deployment plan and approach, while focused on the overall Deployment task, has been developed in the context of overall caBIG® Clinical Information Suite project and will comply and align with the overall plan for the program managed by SAIC-F.

3.1 Management Processes and Approach

The core workflows of the method are:

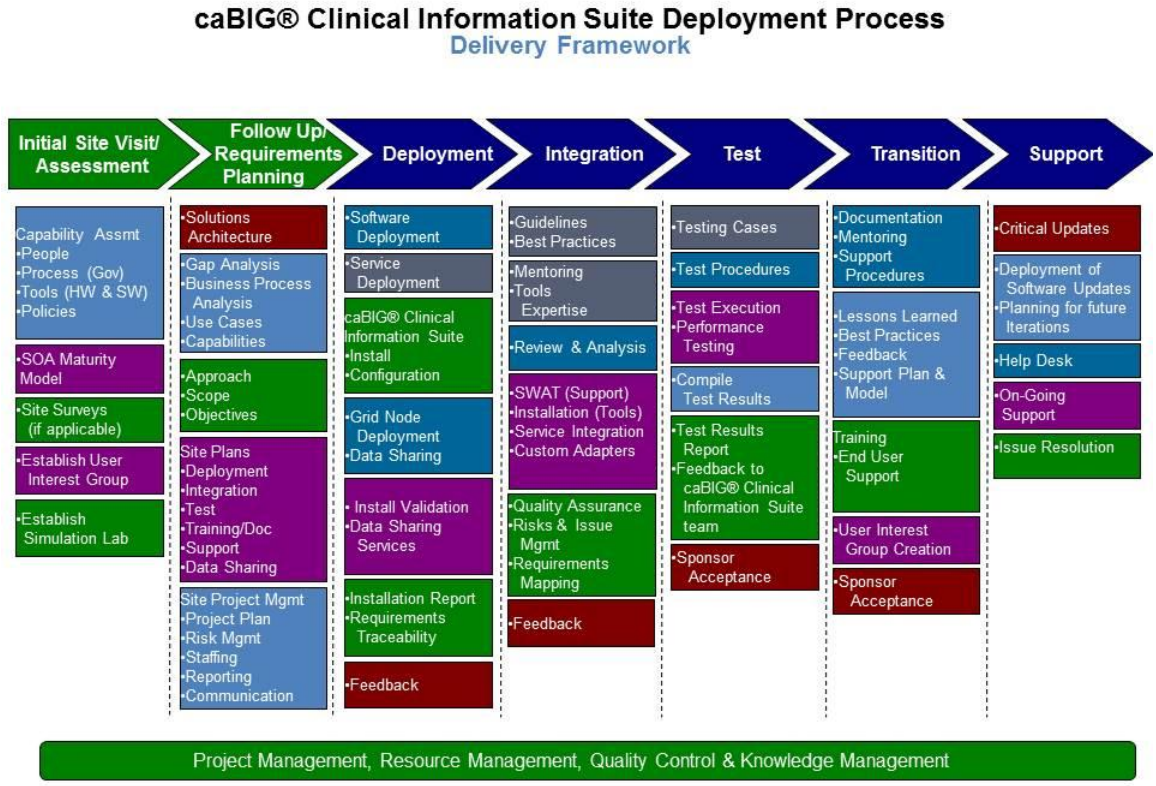
Table 1. Core Workflows

Core workflows	Typical activity and deliverables
Assessment	Initial on-site visit and follow up Deliverables include meeting minutes and technical briefs
Requirements & Planning	Requirements analysis and planning Deliverables include site master deployment plans, proposed architecture and scope documents
Deployment	Installation and configuration of software and services Deliverables include an installation report
Integration	Support integration activities as required, including analysis, development, troubleshooting, and quality assurance
Test	Assist with user acceptance test case development and QA activities Deliverables include user acceptance test results
Transition	Documentation, mentoring and training, GO-LIVE sequence Deliverables include training and engagement documentation
Support	Ongoing support with updates, issues, bugs and incremental deployments

3.2 Project Scope Management

Figure 1 is a graphical summary of the Deployment Team method. The method is also briefly described in the following paragraphs.

Figure 1. Deployment Process



Initial Site Visit/Assessment: Our team will perform a high-level assessment during our initial site visit meeting. We will meet with site staff to:

- Provide an overview of the caBIG® Clinical Information Suite Project
- Develop an understanding of the site goals, objectives and expectations for the caBIG® Clinical Information Suite
- Begin to understand and validate site processes for end-to-end care and operations
- Develop IT and health IM systems understanding and alignment with site processes

The Initial Site Visit/Assessment step gives us an opportunity to carefully examine the organization's current architecture, clinician needs, and readiness for a cultural and organizational change. This process engages all of the stakeholders, including physicians, nurses, support workers, and administrators, providing the opportunity to start building consensus for the caBIG® Clinical Information Suite deployment.

In this approach we will convene a site specific team that will provide the necessary oversight for all client specific activities. The team will include representatives with operational workflow experience as well as strong Information Technology background. The assigned team will have the expertise to formally review the organization's people, process and technology. This includes

a detailed review of the existing infrastructure, an inventory of security and policies, and an analysis of other IT assets (hardware, software and network) that will be impacted by the caBIG® Clinical Information Suite deployment, integration and configuration. This will be accomplished by on-site visits as necessary as well Centra sessions and conference calls as needed.

We will also complete a maturity model and publish summary reports for each adopter site. The maturity model and site visits will help us develop a comprehensive plan for each site. It will also help to identify potential risks and issues early in the adoption cycle. All findings will be communicated to the caBIG® Clinical Information Suite Team. We will work with the caBIG® Clinical Information Suite Team to manage expectations and develop a constant feedback loop with each adopter site.

During the Initial Site Visit/Assessment phase, we will establish the caBIG® Clinical Information Suite Simulation Lab. The Simulation Lab will serve as a test-bed for all deployment activities. The lab will replicate the environment (software, OS, etc) of each site where possible. The team will establish relationships with the vendors (at each adopter site).

Follow Up Visits/Requirements and Planning: Based on the preliminary assessment, we will continue to drill down and gather information to help the Deployment Team ensure that we have a full understanding of the site environment. In addition, we will gather site-specific requirements, develop site-level solutions architecture, and provide a comprehensive site-specific plan including site requirements that encompass all aspects of the client environment.

The standard developed by ASCO is a great summary assessment and site requirements check list. The ASCO checklist includes generic EHR and oncology-specific requirements. This checklist will be customized to identify additional site-specific requirements during the follow up visit phase. The sites' responses to the checklist will enhance adopter profiles and identify requirements gaps / potential site requirements. We will document the relevant business processes, application interfaces, and gaps / site specific requirements in order to develop the necessary implementation-specific use cases working with each adopter site.

The Deployment Team will work with the caBIG® Clinical Information Suite Team to prioritize and ensure that the site-specific requirements are incorporated into overall project specifications and schedules. The Deployment Team will work with the analysts to cross-reference site requirements to use cases, and will perform the required gap analysis. For site-specific requirements, new use cases may have to be developed to fully document the site processes, and business capabilities. The solutions architecture will include the deployment architecture for hardware, software, network, and security. The site deployment plan will be carefully reviewed with SAIC-F to delineate the boundaries of responsibilities of the caBIG® Clinical Information Suite Deployment Team versus what the site provides. Their guidance will be essential to set expectations, ensure minimal to no scope creep, and schedule and develop site-specific plans for each site.

The services delivered by the Deployment Team do not have a user interface or a target off-the-shelf package for integration. During the requirements phase, our team and the site team will have to develop the exact operational procedures in which that service will be used, including the selection of the integration points for the service. This may be a very simple or very involved process, depending on how many systems and organizations are affected by the service introduction.

Developing the plan: Plans will be based on the initial and follow up site visits as well as site Centra sessions and conference calls. We will gather and coordinate with the analysis team newly obtained site-specific requirements. The Deployment Team will establish the goals, objectives, expectations, scope, and timeline for each site. The project management plan for

each site will include roles and responsibilities of all the participants, including internal (caBIG® Clinical Information Suite) and external stakeholders (sites).

The deployment plan for each site will include:

- The scope of deployment
- The solution architecture
- The schedule and milestones
- The resources associated with the deployment
- The risk mitigation plan
- The security integration plan
- The site communication plan
- The site installation and integration approach and plan
- The approved list of deployment site caBIG® Clinical Information Suite use cases
- The training and helpdesk plan
- The ongoing support plan to address bugs and issues
- The data sharing plans

As part of this process we will establish success criteria for each site with well-formulated user acceptance and testing plans. We will also engage the vendor community to identify gaps and include their input in the planning phase of the project. Potential integration and deployment risk and issues will be communicated to all the stakeholders.

Deployment: Our Team will support the installation of the caBIG® Clinical Information Suite extensions and all the enterprise services needed to support integration and interoperability. The deployments will be conducted in stages with a test and demonstration activities in the simulation lab.

We will validate installation environments (stage/production) according to deployment plan, install the necessary caBIG® Clinical Information Suite extensions and all other software required to support the extension, and, if applicable, we will grid enable the services. The scope of the deployment will be the five NCCCP sites and an additional oncology hospital or clinic identified by CBIIT.

Integration: If necessary we will leverage open source integration tools to achieve system interoperability between caBIG® Clinical Information Suite, clinical services and NCCCP site systems. We will establish relationships with collaborating COTS vendors to interface and integrate the services with the COTS products.

We will work with the sites to integrate the services into their existing environment. The scope of the work will be determined in conjunction with SAIC-F COTR and the adopter site, as the sites are expected to actively participate in this activity. The initial scope of work will include the integration of the caBIG® Clinical Information Suite SOA with existing vendor systems for five NCCCP Sites for adoption or adaptation.

In addition to the NCCCP sites, we will also assist with the deployment at an additional oncology hospital or clinic identified by CBIIT. Based on the site-specific requirements and in consultation with SAIC-F, we will deploy and integrate additional services identified by the caBIG® Clinical Information Suite Team.

Testing: Deployment support is a high priority activity for the QA/CI discipline, to ensure implementation and adoption success. Deployment specific support will take the form of:

- Validation of deployment site requirements in developed systems where available

- Partnering with Lombardi Cancer Center to ensure subject matter expertise is employed to review deployment plans and evaluate business process change requirements
- Pre-deployment, site specific testing
  - Use Case based testing specific to each site
  - Lombardi Cancer Center partner collaboration developed Beta User Acceptance Testing
- Co-operative UAT testing and support with each deployment site

Transition (Training and Documentation): We will provide all the necessary transition support to ensure smooth rollout of the caBIG® Clinical Information Suite. We will develop training material and conduct training sessions to educate the client team, including end user training and systems training for ongoing support. Special emphasis will be placed on the "GO-LIVE" strategy and time period.

We will collect and document caBIG® Clinical Information Suite application-related feedback, suggestions, and lessons learned with respect to caBIG® Clinical Information Suite application installation and integration procedures, culminating in recommended improvements to the caBIG® Clinical Information Suite application post installation.

Help Desk and Ongoing Support: Our team will provide ongoing support for additional installations and configurations, as multiple iterations of the services are developed by the caBIG® Clinical Information Suite Team. We will establish a triage system and engage with the Client Support Teams and the Development Teams to coordinate the resolutions of software problems. As new modules/services are released, we will work with the site team to support all upgrades or deployment of additional functional models by repeating the appropriate processes for that site.

We will establish a Deployment Product Support Team and Helpdesk to monitor and track issues, resolve issues across each of the site deployments, support reporting, user training and provide overall support.

3.3 Project Planning

Currently, JIRA is being used for tracking of tasks and rollup to a master project plan by the PMO. This will be continued for the project duration. We will work with the PMO to ensure that their needs from a project management standard are being met. The Deployment Team will manage their part of the overall project at the project level, with milestones, tasks, and sub-tasks being the driving factors. The Deployment Project Manager will ensure that the cross-team and external dependencies are clearly identified in JIRA to allow for effective management of these dependencies.

JIRA will have the major milestones for deliveries and coordination for the project horizon. The JIRA project schedule is a dynamic document updated weekly for the short term activities. As more details are learned about the sites, additional tasks will be added with the appropriate timeframe.

It is expected that all major milestones will be coordinated with the overall caBIG® Clinical Information Suite plan to ensure a cohesive and consistent approach.

While formal coordination is necessary to ensure overall project management and delivery is successful, our team recognizes that frequent informal interchanges will be critical to ensure that our team is in constant communication with all other participating teams. If necessary, a specific sub-project or list of activities will be developed to coordinate a particular aspect of the project in

JIRA. These detailed sub-projects will be rolled up at the task level to the main deployment plan held by the PMO.

3.4 Management Controls

The following sections describe the management controls employed by our team in the areas of contract level program management, project execution and control, project status reporting and review, and quality assurance/quality management.

3.4.1 Contract Level Program Management

We will manage this contract within budget, on-time, and with quality support and deliverables. Our team will provide support to the technical staff and the customer organization to meet the task requirements while allowing the project manager to organize and manage the day to day activities. This support and all corporate monitoring will be on a strictly non-interference basis to ensure no impact to on-going contract activities. Our team's management approach assures that:

- Work performed by our team is within scope of the contract
- There is clear visibility of all activities
- All responsibilities and interfaces are easily identified
- Project management personnel have the processes and tools to effectively monitor, control, and administer multiple assigned efforts
- Tasked personnel clearly understand all work to be performed

The Deployment Team will use a variety of policies, procedures, and techniques to manage productivity, monitor costs, and invoke quality control. Task deliverables communicated to the client will be reviewed through our quality assurance processes prior to delivery to ensure that contract requirements are met and that quality is built into the deliverables.

3.4.2 Project Execution and Control

Project controls will remain simple and unambiguous. Team members have access to work directly with the project manager/DSL. The project manager will conduct daily "scrums" with the Deployment Team. During these meetings the team members will briefly inform the team of what they have accomplished since the previous meeting, what they are working on next, and whether they have any current impediments.

At the beginning of each iteration, the project manager will hold a planning meeting with the team. During this meeting, the planned work for the month will be reviewed to ensure the work is understood. Afterwards, the DSL will analyze the work to create a detailed task list and analyze the dependencies and available resources to determine a viable approach to completing all of the tasks in the iteration. If new deliverables are identified, they will be added to the project schedule. Throughout the iteration, daily activities will be chosen from the task list in accordance with the agreed-on approach. As the iteration progresses and work is completed or unexpected issues arise, the task list will be updated to reflect the remaining work. The trend in "remaining work" will be used as an early indicator of whether the slated work can be accomplished in the sprint or whether the project manager must investigate and intervene.

The Deployment Team uses JIRA for tracking. The project manager will review the project schedule weekly and identify and question any major discrepancies for the budgeted resources and schedule. The project plan and schedule will also provide the government with an unambiguous measure of the performance against goals. The project plan and schedule will be a living document and the project manager will maintain it throughout the duration of the contract. This plan will act as an instrument for control of schedule, resources, milestones, deliverables, and dependencies. It will also provide concrete evidence of progress throughout the project.

Additional quality assurance controls are discussed in the Quality Assurance section, and risk management controls are discussed in the Risk Management section.

3.4.3 Project Status Reporting and Review

The project manager will review the JIRA status and will monitor any issues or risks that were raised during the daily scrums. Depending on the severity of the risk, the project manager will handle the issue directly, discuss the issue with the party informally, or escalate the risk as appropriate. The JIRA status information will also be aggregated and used in preparation of a monthly report. The monthly report will be prepared in accordance with the client directions and will include:

- Technical progress reporting
    - Project status overview, including status of deliverables/milestones
    - Schedule of activities planned for next reporting period
    - Description of activities completed during the month
    - Description of activities planned for the next month
    - Description of resolution(s) to previously-identified issues/obstacles
    - Delineation of risk factors that may delay completion of planned items and recommended solution(s)
    - Issues and problem areas
    - Risks and possible contingencies measures
- Financial reporting
    - Budgeted total and budgeted monthly hours
    - Actual hours expended for the reporting period by unit, including breakdown by labor category and name
    - Actual hours expended to date by task, including breakdown by labor category and name, task totals and task order total
    - Actual costs to date and for the reporting period (based on actual hours)
    - Estimated Cost to Completion
    - Estimated Cost at Completion
    - Task/Cost variance (for >10% variance include explanation/analysis)
    - Other direct cost (ODC) progress/costs

Note: Our team expects to work openly and communicate frequently with SAIC-F COTR and the caBIG® Clinical Information Suite PMO. Issues will not wait for the formal status report to be raised and addressed with input from SAIC-F and NCI CBIIT. It is expected that regular bi-weekly meetings will be held on this project with SAIC-F and the PMO.

3.4.4 Quality Assurance and Quality Management

Our team will ensure that each artifact (document, design, code, or process) is reviewed and passes the quality standards defined by the statement of work and as agreed on by our team and the caBIG® Clinical Information Suite management. Each review will generate a report with necessary proposed changes to the artifact.

The Deployment Team will perform peer reviews of technical deliverables. These peers may include government personnel, other contractors or EKAGRA personnel not specifically engaged in the Deployment area. EKAGRA will support the peer review process by providing relevant subject matter expertise. The peer review process has been used in the past with visible and significant quality improvement in the deliverable content and presentation.

Our team will be specifically responsible to review all deliverables according to the following criteria:

- **Accuracy -** Work Products shall be accurate in presentation, technical content, and adherence to accepted elements of style
- **Clarity -** Work Products shall be clear and concise
- **Consistency to Requirements -** All work products must satisfy the requirements of the statement of work. The deliverable documents will be checked against the specifications of each task as described in the project plan and task approaches.
- **Timeliness -** Work Products shall be submitted on or before the due date specified in this statement of work or submitted in accordance with a later scheduled date determined by the client

To assist in meeting these criteria, provided templates will be used, and if not available new templates will be developed to assure consistency in the deliverables.

3.5 Risk Management

The Deployment Team will submit documentation of project risks every 2 weeks and internally perform risk assessment and documentation on a weekly basis to be in conformance with PMO requirements and meet project needs. This will also be reported on a monthly basis to the COTR. Specific data about each identified risk will be entered into JIRA with required data elements. A corresponding risk mitigation plan and structured risk contingency plan will be entered into JIRA by filling out the required data elements.

3.6 Program Reviews

While the project manager is responsible for the timely completion of tasks, the president of EKAGRA and the senior managers are also responsible to verify that the project plan and practices proposed in this document are followed. To ensure the successful completion of the planned activities to the customer's satisfaction, EKAGRA management conducts weekly status meetings focused on progress and risks. A cross-functional team is present and can help prioritize and suggest mitigation strategies for schedule and project risks.

The notes of these meetings are confidential to EKAGRA and added to the corporate files. Confidentiality encourages full disclosure to the EKAGRA Management Team. The EKAGRA management will support the team in problem resolution and assist the project manager in taking corrective actions. The action items and recommendations from the review are added to the status reports provided to the client.

4 Project Staffing

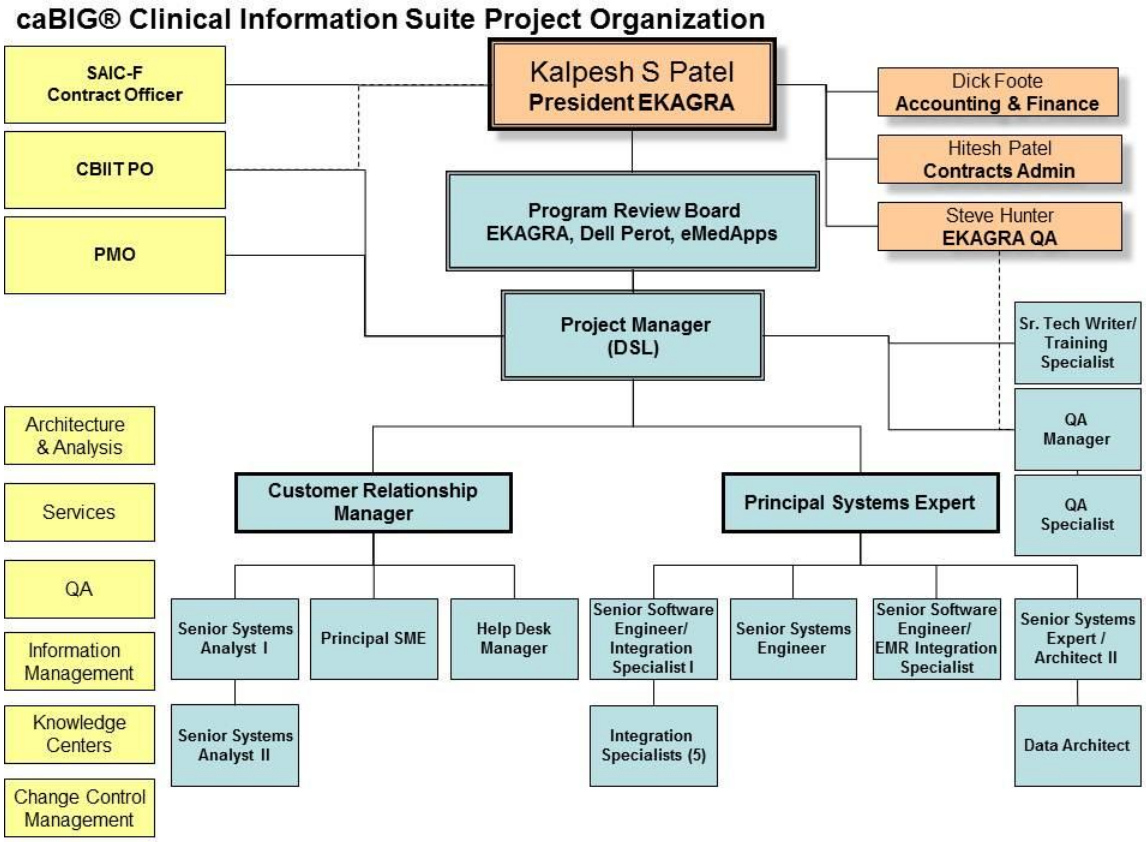
We have organized the team into a simple structure where all activities are planned and executed under the direction of a full time project manager - termed discipline specific lead (DSL). The personnel will be blended into a single team with no corporate lines in delivery. The corporate relationships are managed through the executive steering board, which will conduct program reviews with each release. The review process will be open to SAIC-F for cooperative, fact-based management of the task.

The organization is scalable to enable concurrent deployment efforts. We can add or subtract deployment "squads" or "Swat Teams" without substantially altering the project structure. We can adjust the deployment staff according to project needs as expressed by the SAIC-F PM. The project organization has the following key components:

- The **Program Review Board** engages executives from all subcontractors to oversee the delivery. The board convenes quarterly, in conjunction with the release cycles.

- The **Project Manager – Discipline Specific Lead (PM - DSL)**, is the leader and the coordinator of the project and is the primary interface with the SAIC-F caBIG® Clinical Information Suite PM. The PM performs all the management tasks and reports to the President of EKAGRA. Under the PM, the team is organized with a matrix structure. For each site, the PM will assemble a virtual team made up of the following members: deployment analyst, software engineer, systems engineer, trainer, and QA. Resources maybe shared across sites as applicable.
- The **Customer Relationship Manager (CRM)** brings practical experience working in clinical settings, both inpatient and ambulatory, and supporting health IT solutions. The CRM will act as a domain expert focal point for supporting the product and the community. The CRM ensures that the product developed is deployable to community cancer centers, “packaged” properly, and “pre-marketed” to users. The CRM also manages product support and triages reported issues.
- The **Senior Systems Analyst** a.k.a. **Deployment Analyst** is a hands-on lead working together with the community cancer centers. The primary responsibility of this group is to conduct site reviews, develop site-specific requirements, use cases, and data sharing plans, and validate the materials with domain experts, caBIG® Clinical Information Suite analysts, and the Development Team.
- The **Deployment Architect** (also known as **Principal Systems Expert)** will be working with the lead analyst and senior systems engineer as a team primarily responsible for each site specific deployment plan, development of data services based on the data sharing plan, and support for the integration of caBIG® Clinical Information Suite at local deployment sites.
- The **Senior Systems Engineer** is the part of the Deployment Installation Team which is responsible for performing installations at the given site under the direction of the lead deployment engineer.
- The **Training** function will be fulfilled by the Deployment Helpdesk and Training Team and will be responsible for developing and delivering necessary training material for the sites, and providing the post-deployment technical support. This team is also responsible for setting up the Deployment Simulation Lab.
- The **QA** Team is responsible for ensuring that the product is ready for deployment and validating that the deployment site use cases developed by the Analysis Team and Deployment Team are fully tested and the software is ready for installation. This team will also support deployment site personnel with the user acceptance testing.

Figure 2. Project Organization



5 Deliverables

Our team will adhere to the overall caBIG® Clinical Information Suite release/iteration schedule as defined by the PMO. In addition to planning per iteration, the Deployment Team has committed to producing a number of deliverables according to the approved contract award. The following table contains the planned delivery dates for the required contractual documents.

Table 2. Deliverables

Description	Due Date
Task Order Artifacts and Deliverables	
ARRA Quarterly Report	5th day of the month following the last month of the reporting quarter
Notification of reaching 85% of total Task Order	Month prior to reaching 85%
Commitment to Protect Non-Public Information – Contractor Agreement	Prior to beginning work for each team member
NIH Computer Security Awareness Training	Prior to beginning work for each team member

Description	Due Date
Roster and scanned copies of training certificates	Within 14 calendar days of effective date of subcontract AND revisions within 15 calendar days of changes to roster
Communication Plan	TBD
Project Management Artifacts and Deliverables	
IT Access Listing	Within 45 days of effective date
Project Management Plan (PMP)	October 1, 2010
Project Plan and Schedule	7/12/2010, Delivered for RC2 I1 8/10/2010, Delivered for RC2 I2
Monthly Status Report	Following the end of each month
Project Summary Report	October 1, 2010 and October 1, 2011
Transition Plan Report	end of contract
Deployment Artifacts and Deliverables	
Group A: Site Business Specific Artifacts	**October 1, 2010 and October 1, 2011**
Site Planning Session Report	
Site Visit Report	
Site Requirements Report	
Site BPM Report	
Site Interoperability Report	
Site Data Sharing Report	
Site Assessment Report	
Site Survey Report	
Site Maturity Model	
Group B: Deployment Approach Artifacts	**October 1, 2010 and October 1, 2011**
OHT Deployment Approach Report (Adopt and RI)	
Site Engagement Approach	
OHT Engagement Approach	
Vendor Engagement Approach	
Site Deployment Approach Report (Adopt and RI)	
Group C: Site Infrastructure and Installations Artifacts	**October 1, 2010 and October 1, 2011**
Site Infrastructure Diagrams and Report	
Site Release Installation Plan	
Site Security and Privacy Integration Plan	
Site System Operating Environment (SOE)	
EHR Lab Configuration and Setup Report	
Site/OHT ECCF Conformance Approach	
Group D: Operations and Training Artifacts	**October 1, 2010 and October 1, 2011**
Site UAT Report	
Site Release Installation Report	
Deployment Feedback Report	

Description	Due Date
Site Sustainability Report	
Site Upgrade Report	
Site Training Materials	
User Guide	
Admin Guide	